

In the Claims

Applicant hereby submits amended claims, including a complete listing of all claims in the application with the status of each claim in parentheses.

CLAIMS:

Claims 1-17 (Previously canceled)

18. (Currently amended). A reciprocating piston device comprising:

a piston-cylinder assembly having at least four cylinders ~~pistons~~ and at least one case, ~~said case having at least one section,~~ each of said cylinders ~~pistons~~ having one piston, an axis each said cylinder and its said piston having a common axis;

an oscillating intermediate shaft having a rotational axis, said shaft kinematically connected to said pistons;

a crankshaft ~~kinematically connected to said intermediate shaft, said crankshaft~~ having one crank and carrying an element transmitting rotation between said crankshaft and an adjacent device, said crankshaft kinematically connected to said intermediate shaft;

at least one primary transmission mechanism connecting said pistons and said intermediate shaft, each of said primary

transmission mechanisms and the pistons connected to it being housed in one separate case section ~~of said sections~~; and

a secondary transmission mechanism connecting said intermediate shaft and said crankshaft, said secondary

5 transmission mechanism being housed in another one separate case section ~~of said sections~~ having a chamber, said chamber having an opening closed by a cover.

19. (Currently amended) The device of Claim 18, wherein

10 the piston-cylinder axes ~~of said pistons~~ are arranged in one plane, said plane being parallel to the axis of said intermediate shaft, each said piston-cylinder ~~piston~~ axis having two cylinders and two pistons, said two pistons being connected by a general piston rod;

15 said primary transmission mechanism comprises a pinion secured on said intermediate shaft, and said general piston rod having a rack; and

said secondary transmission mechanism comprises a pinion secured on said intermediate shaft, a slide block having a rack,
20 and a connecting rod, said connecting rod being connected to said slide block on one end and to said crankshaft crank on another end.

20. (Currently amended) The device of Claim 19, further

comprising at least one additional cylinder and one additional
piston, said additional piston connected to its own piston rod,
said additional cylinder and piston having an axis arranged on
the same plane as the pistons connected by said general piston
5 rod, each said additional piston having a primary transmission
mechanism comprising a pinion secured on said intermediate shaft
and said piston rod having a rack.

21. (Currently amended) The device of claim 18, wherein
10 the piston-cylinder axes ~~of said pistons~~ are arranged in
two planes, said planes being parallel to the axis of said
intermediate shaft, each said piston-cylinder ~~piston~~ axis having
two cylinders and two pistons, said two pistons being connected
by a general piston rod;

15 said primary transmission mechanism comprises a pinion
secured on said intermediate shaft and two said general piston
rods, each rod having a rack; and

said secondary transmission mechanism comprises a pinion
secured on said intermediate shaft, a slide block having a rack,
20 and a connecting rod, said connecting rod being connected to
said slide block on one end and to said crankshaft crank on
another end.

22. (Currently amended) The device of Claim 21, further

comprising at least two additional cylinders and two additional
pistons, said pistons connected to their own piston rods, ~~and~~
said additional cylinders and pistons having axes arranged on
the same planes as the pistons connected by said general piston
5 rods, each two said additional pistons having a primary
transmission mechanism comprising a pinion secured on said
intermediate shaft and two said piston rods, each rod having a
rack.

10 23. (Currently amended) The device of claim 18, wherein
the piston-cylinder axes ~~of said pistons~~ are arranged in
two planes, said planes being parallel to the axis of said
intermediate shaft, each said piston-cylinder ~~piston~~ axis having
two cylinders and two pistons, said two pistons being connected
15 by a general piston rod;

said primary transmission mechanism comprises a double-armed
lever secured on said intermediate shaft, two said general
piston rods, and two shackles connecting said double-armed lever
and each of said general piston rods; and

20 said secondary transmission mechanism comprises a single-
armed lever secured on said intermediate shaft, and a connecting
rod, said connecting rod being connected to said single-armed
lever on one end and to said crankshaft crank on another end.

24. (Canceled)

25. (Canceled)

5 26. (Canceled)

27. (Canceled)

28. (Canceled)

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29. (Canceled)

30. (Canceled)

15 31. (Canceled)

32. (Canceled)

33. (New) The device of Claim 18, wherein said piston-
20 cylinder assembly comprises at least six cylinders, the axis of
said cylinders are arranged in three planes, said planes being
parallel to the axis of said intermediate shaft, each said
piston-cylinder axis having two cylinders and two pistons, said
two pistons being connected by a general piston rod, said

cylinders being arranged by groups, each group having six cylinders, four of said six cylinders being arranged nearer to said intermediate shaft, and two of said cylinders being arranged farther from said shaft; and

5 each of said group of cylinders comprises a tertiary transmission mechanism connecting two of said six cylinders arranged farther from said intermediate shaft and two cylinders arranged nearer to said shaft.

10 34. (New) The device of Claim 33, wherein said primary transmission mechanism comprises a pinion secured on said intermediate shaft and two said general piston rods, each said rod having a rack;

said secondary transmission mechanism comprises a pinion
15 secured on said intermediate shaft, a slide block having a rack, and a connecting rod, said connecting rod being connected to said slide block on one end and to said crankshaft crank on another end; and

said tertiary transmission mechanism comprises a pinion and
20 two said general piston rods, each said rod having a rack.

35. (New) The device of claim 18, wherein the axes of said cylinders are arranged in two planes, said planes being parallel to the axis of said intermediate shaft, each said piston-

cylinder axis having one said cylinder and one said piston, said cylinders being arranged by groups each having two cylinders;

at least one primary transmission mechanism connecting two of said pistons and said intermediate shaft, said primary
5 transmission mechanism having a double-armed lever secured on said intermediate shaft and two links connecting each of said pistons and said double-armed lever; and

the secondary transmission mechanism connecting said intermediate shaft and said crankshaft being united with one of
10 primary transmissions, said secondary transmission mechanism having a three-armed lever secured on said intermediate shaft, two links connecting each of said one group of pistons and one arm of said three-armed lever, and a connecting rod, said rod connecting the third arm of said three-armed lever and said
15 crankshaft crank.